ABSTRACT OF THE DISCLOSURE

A distributed simulation system includes a plurality of nodes. Each node is configured to simulate a portion of a system under test. The simulation is performed as a series of timesteps. The transition between timesteps is synchronized in the plurality of nodes. In one implementation, the distributed simulation system includes a hub which is configured to synchronize the transition between timesteps in the plurality of nodes. For example, in one embodiment, the hub may receive commands from each of the plurality of nodes. If each command indicates that the corresponding node is capable of completing the timestep, the hub transmits a command to each node indicating that the timestep is complete. The nodes may begin processing the next timestep in response to the command. In other embodiments, a hub may not be included.